Package 'di'

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Type Package

Title Deficit Index (DI)

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Description A set of utilities for calculating the Deficit (frailty) Index (DI) in gerontological studies. The deficit index was first proposed by Arnold Mitnitski and Kenneth Rockwood and represents a proxy measure of aging and also can be served as a sensitive predictor of survival. For more information, see (i)``Accumulation of Deficits as a Proxy Measure of Aging" by Arnold B. Mitnitski et al. (2001), The Scientific World Journal 1, <DOI:10.1100/tsw.2001.58>; (ii) ``Frailty, fitness and late-life mortality in relation to chronological and biological age" by Arnold B Mitnitski et al. (2001), BMC Geriatrics2002 2(1), <DOI:10.1186/1471-2318-2-1>.

RoxygenNote 6.0.1

Suggests knitr, rmarkdown

VignetteBuilder knitr

Imports scales

Depends R (>= 3.3)

Encoding UTF-8

License GPL-3

NeedsCompilation no

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di *This function calculates the Deficit Index (DI) and returns results as list:* di *a column-vector containing deficit indexes for each individual and* columns *that were used to calculate the* di.

Description

This function calculates the Deficit Index (DI) and returns results as list: di a column-vector containing deficit indexes for each individual and columns that were used to calculate the di.

Usage

```
di(dat, cols = NULL, invert = NULL, rescale = TRUE, age = NULL,
  rescale.custom = NULL, rescale.avoid = NULL, bins = 7,
  visible = FALSE)
```

Arguments

dat	A data frame. Required parameter.
cols	A list of column names. Default: NULL.
invert	A list of columns which have to be inverted. Default: NULL.
rescale	A flag that tell the program to rescale columns if the values a not 0/1. Default: TRUE.
age	A name of column which represents age of a patient. Default: NULL.
rescale.custom	A custom rescaling. See example below. Default: NULL.
rescale.avoid	A set of column names for which rescaling should be avoided. Default: NULL.
bins	A number of bins for plotting the DI against age from a dataset. Default: 7.
visible	A flag to show DI plot (mean DI in a population by age) Default: FALSE

Value

A list of two: di a column-vector containing deficit indexes for each individual and columns (rescaled if flag rescale was set to TRUE) that were used to calculate the di.

Examples

```
library(di)
dd <- data.frame(subj=seq(1:100),
                 var1=rbinom(100,1,.5),
                 var2=rbinom(100,1,.5),
                 var3=rbinom(100,1,.5))
ddi <- di(dd, c("var1", "var2", "var3"))

# Cusom rescaling
ddi <- di(dd, c("var1", "var2", "var3"), rescale.custom=c("var1:0.1:0.5"))
ddi
```

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